

## **REMARKS**

### **Rejections pursuant to 35 USC § 112**

The Examiner has rejected claims 38 and 39 as containing subject matter not found within the specification. Namely, the Examiner states that the specification does not describe a sensor assembly “whereby the sensor assembly is operable at temperatures up to 1000°C”. However, as the specification does describe that Silicon Carbide “does not suffer from the introduction of defects at temperatures up to 1000°C” (see p. 18, line 19 – p. 20, line 7). Therefore, claims 38 and 39 have been amended to clarify that the sensor assembly may be of silicon carbide “to remain operable at temperatures up to 1000°C” as described in the specification. In light of these amendments, applicants respectfully request removal of rejections pursuant to 35 USC § 112.

### **Rejections pursuant to 35 USC § 102**

The Examiner has rejected independent claim 1 as anticipated by Kortright et al. (*Amorphous silicon carbide coatings*, 1988), along with dependent claims 43-45. Namely, the Examiner states that Kortright discloses a “silicon carbide film on a substrate transmissive to light”. However, claim 1 has been amended as indicated above to clarify that a substrate may be “transmissive to infrared radiation”. Kortright fails to disclose such a feature.

The Examiner has rejected independent claim 34 as anticipated by Pankove (U.S. Pat. No. 4,109,271), along with dependent claims 35-37. Namely, the Examiner states that Pankove discloses “silicon carbide formed on a photovoltaic device”. However, as described below, Pankove fails to disclose a sensor as claimed in claim 34.

The Abstract of Pankove makes reference to a silicone carbide layer of a photovoltaic device. However, upon further examination, it is apparent that the silicon carbide layer of Pankove is not actually “on” the conductive substrate of the device. Rather, the silicon carbide layer 16 is several layers removed from the conductive substrate 11 (see Fig. 1, col. 2, lines 1-64). This differs from claim 34 where a “silicon carbide film” is actually “*on* the sensor” (i.e. conductive substrate), thus providing heat protection to the sensor and other advantages described throughout the specification. Such a feature or advantages are not described in Pankove.

The Examiner has rejected independent claim 38 as anticipated by Nagai et al. (*Silicon Carbide Thin Film Thermistor*, 1984). Namely, the Examiner states that Nagai discloses a silicon carbide film as part of a thermistor operable at 350°C. However, claim 38 as amended clarifies that a device of the present invention may be “operable at temperatures between about 350°C and about 1000°C”. Nagai fails to disclose such an operating range.

The Examiner has rejected independent claim 39 as anticipated by Truher et al. (U.S. Pub. No. US005425860). Namely, the Examiner states that Truher discloses a doped silicon carbide film as part of a sensor operable at 730°C. However, claim 39 as amended clarifies that a sensor of the present invention may be “operable at temperatures between about 730°C and about 1000°C”. Truher fails to disclose such an operating range.

The Examiner has rejected independent claim 42 as anticipated by Loboda et al. (U.S. Pub. No. US005818071). However, according to the amendment indicated above, claim 42 has been canceled.

In light of the arguments above, applicants respectfully request removal of rejections pursuant to 35 USC § 102.

Rejections pursuant to 35 USC § 103

The Examiner has rejected independent claim 24 as unpatentable over Bang (U.S. Pub. No. US005831324) in view of Dewey (*Low Resistivity Components*, 1999).

Dependent claims 25-33 are similarly rejected with or without additional reference to Wahab et al. (*Growth of Epitaxial SiC Films*, 1993), Pankove, and Meyers et al. (U.S. Pat. No. 4,451,119). Namely, the Examiner states that Bang discloses a thin film which provides shielding against electromagnetic interference whereas Wahab discloses silicon carbide thin films on generic structures to, as the Examiner states, “prevent corrosion” or “to conduct incident electromagnetic fields to ground”. However, claim 24 has been amended to note that assemblies of the present invention may include silicon carbide on a region “to allow the region to remain operable at temperatures up to about 1000°C”.

Neither Bang nor Wahab discloses such operating temperatures.

The Examiner has rejected independent claim 40 as unpatentable over Zappe et al (*High Temperature 10 Bar Pressure Sensor*, 2001), along with dependent claim 41.

However, claims 40 and 41 have been canceled as indicated above.

In light of the arguments above, applicants respectfully request removal of rejections pursuant to 35 USC § 103.

Petition for Extension of Time

Petition hereby is made under the provisions of 37 CFR 1.136 for a one (1) month extension of the time for submission of an Amendment and Response in response to the December 18, 2002, Office Action which set a three (3) month term for response, expiring March 18, 2003.

With the entry of this Petition, the response term is extended to expire on April 18, 2003.

Please charge deposit account no. 50-0860 in the amount of \$110 for this Petition for Extension of Time.

Conclusion

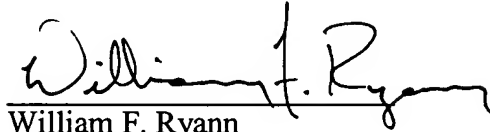
Applicants respectfully submit that claims 1, 24-39, and 43-45 are in condition for allowance. The Examiner is requested to contact the undersigned attorney at (203) 794-1100 should this be seen as helpful in advancement of prosecution of this application.

Please charge any deficiency or credit any overpayment to Deposit Account No.

50-0860.

Date: April 14, 2003

Respectfully submitted,

A handwritten signature in cursive script, reading "William F. Ryann". The signature is written in dark ink and is positioned above a horizontal line.

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